

What is claimed is:

1. An upgrade apparatus for a home network system which is installed in the home network system having a first storage unit in which at least one protected
5 program has been installed, and which comprises an upgrade means for deciding whether a second storage unit separated from the first storage unit stores an upgrade file corresponding to the protected program, and upgrading the protected program by using the upgrade file according to the decision result.
- 10 2. The apparatus of claim 1, wherein a first storage unit protecting program is installed in the first storage unit, and the upgrade means upgrades the protected program after the first storage unit protecting program is executed.
3. The apparatus of claim 1, further comprising:
15 a connection means for communication with an external server; and
a control means for transmitting upgrade information for the protected program stored in the second storage unit to the external server through the connection means, and receiving upgrade data containing a new upgrade file and upgrade information for the protected program from the external server.
- 20 4. The apparatus of claim 3, wherein the control means stores the upgrade data in the second storage unit.
5. The apparatus of claim 4, wherein the upgrade means reads the upgrade
25 file from the second storage unit, and upgrades the protected program.

6. The apparatus of claim 4, wherein the control means deletes the upgrade information previously stored in the second storage unit.

7. The apparatus of one of claims 1 to 5, wherein the second storage unit is
5 logically separated from the first storage unit.

8. The apparatus of one of claims 1 to 5, wherein the second storage unit is physically separated from the first storage unit.

10 9. An upgrade method for a home network system including a first storage unit in which at least one protected program has been installed, comprising the steps of:

deciding whether a second storage unit separated from the first storage unit stores an upgrade file corresponding to the protected program; and

15 upgrading the protected program by using the upgrade file according to the decision result.

10 10. The method of claim 9, wherein, when a first storage unit protecting program is installed in the first storage unit, the decision step is performed after the first storage unit protecting program is executed.

11. The method of claim 9, further comprising the steps of:
accessing an external server;
transmitting upgrade information for the protected program stored in the
25 second storage unit to the external server;
receiving upgrade data containing a new upgrade file and upgrade

information for the protected program from the external server; and
storing the upgrade data in the second storage unit.

12. The method of claim 11, further comprising a step for reading the new
5 upgrade file from the second storage unit, and upgrading the protected program.

13. The method of claim 12, further comprising a step for deleting the
upgrade information previously stored in the second storage unit.

10 14. A program storage medium for storing a computer readable program
which is provided to a home network system including a first storage unit in which
at least one protected program has been installed, and which comprises the steps
of:

deciding whether a second storage unit separated from the first storage unit
15 stores an upgrade file corresponding to the protected program; and
upgrading the protected program by using the upgrade file according to the
decision result.

15 15. The medium of claim 14, wherein, when a first storage unit protecting
program is installed in the first storage unit, the program is executed after the first
storage unit protecting program is executed.

16. The medium of claim 14, wherein the program further comprises the
steps of:
25 accessing an external server;
transmitting upgrade information for the protected program stored in the

second storage unit to the external server;

receiving upgrade data containing a new upgrade file and upgrade information for the protected program from the external server; and

storing the upgrade data in the second storage unit.

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17. The medium of claim 16, wherein the program further comprises a step for reading the new upgrade file from the second storage unit, and upgrading the protected program.

10 18. The medium of claim 17, wherein the program further comprises a step for deleting the upgrade information previously stored in the second storage unit.

19. An upgrade apparatus for a home network system which is installed in the home network system communicating with at least one sub-device and
15 including a first storage unit in which at least one protected program has been installed, comprising:

a connection means connected to an external server, for transmitting upgrade information stored in a second storage unit separated from the first storage unit to the external server, and receiving upgrade data containing a new
20 upgrade file and upgrade information from the external server;

a control means for storing the new upgrade information, deciding whether the upgrade file relates to the sub-device or protected program, and transmitting the upgrade file to the sub-device or storing the upgrade file in the second storage unit according to the decision result; and

25 an upgrade means for upgrading the protected program corresponding to the upgrade file.

20. The apparatus of claim 19, wherein the upgrade information relates to the sub-device and the protected program.

5 21. The apparatus of claim 19, wherein a first storage unit protecting program is installed in the first storage unit, and the upgrade means upgrades the protected program after the first storage unit protecting program is executed.

22. The apparatus of claim 21, wherein the upgrade means decides
10 whether the second storage unit stores the upgrade file corresponding to the protected program, and upgrades the protected program by using the upgrade file according to the decision result, after the first storage unit protecting program is executed and before the connection means is connected to the external server.

15 23. The apparatus of claim 19, wherein the control means deletes the upgrade information previously stored in the second storage unit.

24. The apparatus of one of claims 19 to 22, wherein the second storage unit is logically separated from the first storage unit.

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25. The apparatus of one of claims 19 to 22, wherein the second storage unit is physically separated from the first storage unit.

26. An upgrade method for a home network system communicating with at
25 least one sub-device and including a first storage unit in which at least one protected program has been installed, comprising the steps of:

accessing an external server;
transmitting upgrade information stored in a second storage unit separated
from the first storage unit to the external server;
receiving upgrade data containing new upgrade information and a new
5 upgrade file from the external server;
storing the new upgrade information;
deciding whether the upgrade file relates to the sub-device or protected
program;
transmitting the upgrade file to the sub-device or storing the upgrade file in
10 the second storage unit according to the decision result; and
upgrading the protected program corresponding to the upgrade file stored
in the second storage unit.

27. The method of claim 26, wherein the upgrade information relates to the
15 sub-device and the protected program.

28. The method of claim 26, further comprising a step for executing a first
storage unit protecting program before the upgrade step, when the first storage unit
protecting program is installed in the first storage unit.

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29. The method of claim 28, further comprising the steps of:
deciding whether the second storage unit stores the upgrade file
corresponding to the protected program; and
upgrading the protected program according to the decision result, after the
25 step for executing the first storage unit protecting program and before the step for
accessing the external server.

30. The method of claim 26, further comprising a step for deleting the upgrade information previously stored in the second storage unit.

- 5 31. A program storage medium for storing a computer readable program which is provided to a home network system communicating with at least one sub-device and including a first storage unit in which at least one protected program has been installed, and which comprises the steps of:
- accessing an external server;
- 10 transmitting upgrade information stored in a second storage unit separated from the first storage unit to the external server;
- receiving upgrade data containing new upgrade information and a new upgrade file from the external server;
- storing the new upgrade information;
- 15 deciding whether the upgrade file relates to the sub-device or protected program;
- transmitting the upgrade file to the sub-device or storing the upgrade file in the second storage unit according to the decision result; and
- upgrading the protected program corresponding to the upgrade file stored
- 20 in the second storage unit.

32. The medium of claim 31, wherein the upgrade information relates to the sub-device and the protected program.

- 25 33. The medium of claim 31, wherein the program further comprises a step for executing a first storage unit protecting program before the upgrade step, when

the first storage unit protecting program is installed in the first storage unit.

34. The medium of claim 33, wherein the program further comprises the steps of:

5 deciding whether the second storage unit stores the upgrade file corresponding to the protected program; and

 upgrading the protected program according to the decision result, after the step for executing the first storage unit protecting program and before the step for accessing the external server.

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35. The medium of claim 31, wherein the program further comprises a step for deleting the upgrade information previously stored in the second storage unit.